

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: November 25, 1996
Date Received: November 21, 1996
Project: Metro Self Monitor, PO #55337
Date Samples Extracted: November 22, 1996
Date Extracts Analyzed: November 22, 1996

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, AND ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M55337	0.26	0.15	0.28	0.08
Method Blank	<0.05	<0.05	<0.05	<0.05

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 74137 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.26	0.27	4	0-20
Copper	mg/L (ppm)	0.15	0.15	0a	0-20
Nickel	mg/L (ppm)	0.28	0.30	7	0-20
Zinc	mg/L (ppm)	0.08	0.08	0a	0-20

Laboratory Code: 74137 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.26	100	96	80-120	4
Copper	mg/L (ppm)	5	0.15	100	95	80-120	5
Nickel	mg/L (ppm)	10	0.28	100	95	80-120	5
Zinc	mg/L (ppm)	5	0.08	101	97	80-120	4

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	99	100	80-120	1
Copper	mg/L (ppm)	5	99	101	80-120	2
Nickel	mg/L (ppm)	10	100	100	80-120	0
Zinc	mg/L (ppm)	5	101	98	80-120	3

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

RNJ A-I
11.21.96
13:05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

November 25, 1996

INVOICE # 96ACU1125-1
DUPLICATE COPY

Accounts Payable
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134

RE: Project Metro Self Monitor, PO #55337: Results of testing requested by
Gerry Thompson, Project Manager for material submitted on November 21,
1996.

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due

\$ 65.00

FRIEDMAN & BRUYA, INC.

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TEL: (206) 285-8282
FAX: (206) 283-5044

November 25, 1996

**Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford
Seattle, WA 98134**

Dear Mr. Thompson:

Included are the results from the testing of material submitted on November 21, 1996 from your Metro Self Monitor, PO #55337 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



**Kurt Johnson
Chemist**

**keh
Enclosures
ACU1125R.DOC**